Before Starting Engine		
Safety Belts	ON	
Circuit Breakers	IN	
Radio Master	OFF	
Electrical Equip	OFF	
Flaps	UP	
Fuel	FULLEST	
Brakes	SET	
Propellor	FORWARD	
Master Switch	ON	
Strobes/Beacon	ON	
Fuel Pump	ON	

Cold Start		
Throttle	1/4-1/2 inch	
Mixture	RICH 3 sec.	
(until fuel flow, then IDLE)		
Prop Area	CLEAR	
Starter	ENGAGE	
Mixture	RICH on start	
Throttle	1,000 RPM	

Hot Start	
Throttle	1/4 inch
Mixture	IDLE
Prop Area	CLEAR
Starter	ENGAGE
Mixture	RICH on start
Throttle	1,000 RPM

Flooded Start	
Fuel Pump	OFF
Throttle	FULL
Mixture	IDLE
Prop Area	CLEAR
Starter	ENGAGE
Mixture	RICH on start
Throttle	1,000 RPM

Before Taxi	
Oil Pressure	GREEN
Fuel Pump	OFF
Lights	AS REQ
Gear Lights	CHECK
Radio Master	ON/CHECK
Transponder	STANDBY
Brakes	CHECK

Pre Takeoff - Runup	
Controls	CHECK
Instruments	CHECK
Fuel	FULLEST
Throttle	2000 RPM
Magnetos	CHECK
< 175 RPM drop each	
< 50 RPM between	
Propellor	CYCLE x3
RPM drop	
Manifold increase	
Oil pressure drop	
Alternate Air	CHECK
Vacuum	4.8-5.1
Oil Temp	GREEN
Oil Pressure	GREEN
Fuel Pump	OFF
Fuel Pressure	CHECK
Fuel Pump	ON
Throttle	1000 RPM
Ammeter	CHECK
Annunciator Lights	<b>PRESS to test</b>

AUN CTAF	122.7	
AUN ASOS	119.375	
AUN ELEVATION	1538 feet	
NorCal	125.4	

Before Takeoff	
Safety Belts	ON
Door/Window	LATCH
Auto-pilot	OFF
Flaps	SET
Trim	SET
Lights	ON
Fuel Pump	ON
Transponder	ALTITUDE
Propellor	HIGH RPM
Mixture	RICH

Normal Takeoff	
Rotate	60-70
Gear	UP
Climb V <sub>y</sub> At 1000' AGL	100
At 1000' AGL	
Throttle	25"
Propellor	2500RPM
Climb enroute	110

Top of Climb	
Manifold press	SET
Propellor	SET
Fuel Pump	OFF
Mixture	SET
Landing Light	OFF
Gauges	GREEN

V <sub>X</sub> - gear down	85
V <sub>y</sub> - gear down	95
V <sub>X</sub> - gear up	96
V <sub>y</sub> - gear up	100
V <sub>Idmax</sub> - Best Glide	105
Vfe - Flaps Extend	125
Landing Gear Retract	< 125
Landing Gear Extend	< 150
Demonstrated x-wind	17

Before Landing	
Auto-pilot	OFF
Landing Light	ON
Fuel Pump	ON
<b>G</b> as	<b>FULLEST</b>
<b>U</b> ndercarriage	3 GREEN
<b>M</b> ixture	SET
<b>P</b> ropellor	SET
<b>S</b> eat belts	ON
Flaps	< 125
Final Approach	90

After Landing	
Flaps	UP
Fuel Pump	OFF
Lights	As Req.
Transponder	STBY

Engine Shutdown	
Radio Master	OFF
Lights	OFF
Mixture	CUTOFF
Magnetos	OFF
Master Switch	OFF
Hobbs Meter, Tach	<b>RECORD</b>
Tiedown, chocks, cover	INSTALL

## **Emergency Gear Extension**Panel lights - daytime OFF

Gear indicator bulbs CHECK
Airspeed < 100
Gear selector \*\* DOWN
Emergency gear lever DOWN

\*\* for emergency practice, pull gear pump breaker, gear selector UP until emerg 3 green, then DOWN, breaker in